

The An Essay
has been employed, on
Inflammation

Respectfully Submitted
to the Faculty of the
Homoeopathic Medical College
of Pennsylvania

on the
Twenty Ninth day of January
One thousand eight hundred and fifty three

The red color of the skin in
inflammation John Turner suggested
of Detroit, Michigan

Phlegmon, in the same manner as the
increased. The term Inflammation has
been employed, to denote the existence
of an unusual degree of redness, pain,
heat, and swelling, in any of the textures
or organs of which the human body is
composed. The simultaneous occurrence
of these morbid phenomena is in general
accompanied by increased quickness
of the pulse, and warmth of the skin, and
also more or less of the other signs of fever;
and hence the distinction among the
symptoms of inflammation into local,
and febrile or constitutional.

The red color of the skin in
inflammation appears to have suggested
to the Greeks the resemblance of this state
to flame, hence, the terms *Phlogosis* and

Phlegmon, in the same manner as the increased heat of the skin in fever appears to have supposed the similarity of that state to fire, hence, the terms Pyretos of the ancient, and Pyrexia of the modern Physicians. Inflammation and fever, words so nearly allied in their primitive signification, are now merely technical terms, neither intended nor fitted to express anything relative to the nature, cause, or distinguishing characters of the two distinct phenomena, which they are respectively employed to indicate.

Attending to the local and Constitutional phenomena produced in the body by inflammation, at first we are liable to be perplexed with the apparently endless variety presented to us. Closer attention

Soon discovers sufficient uniformity in their occurrence, and various combinations which they form, enabling us to distinguish them into various kinds of inflammation, each exhibiting appearance, and requiring treatment peculiar to itself.

Local Symptoms, which seem to be essential to inflammation, are as follows; redness, pain, heat, and swelling.

The redness which accompanies inflammation varies in degree and kind according to the violence of the affection and the nature of the part in which it occurs. In the incipient stages it obviously depends on the influx of an unusual quantity of blood into the vessels of the part becoming inflamed. The redness may be produced either by the distention of the minute vessels, which

Naturally convey a small quantity of red blood, or by the red particles entering into vessels, which in their healthy state admit only Serum. — In inflamed surfaces, the small blood vessels become enlarged in their diameters, and the new red vessels which appear suddenly, seem to be merely continuations of their trunks.

It is known that a part may be made red by friction, warm water, &c., but this being of short duration, does not alone constitute inflammation. It may be considered even when thus excited, as the first step to the production of that state; for if any of the causes which excite redness be continued, or increased, the redness becomes accompanied with pain, and passes into inflammation.

Redness in inflammation is generally greater towards one point of the part affected, and decreases gradually as it extends from this, until it becomes imperceptible. But in some cases its termination is abrupt and distinctly marked.

The redness in some inflammations resemble arterial blood, in others venous.

Redness of parts caused by slight inflammation, not un frequently disappears after death, and it is often difficult to discover the spot which during life, had been the seat of inflammation.

Pain, depends partly on the over distension of the vessels and fibres, and partly on the pressure caused by the swelling on the nerves of the inflamed part. It is often increased at each contraction of the heart, and corresponding distension of the arteries, constituting pulsatile pain.

Parts which in the sound state have little or no sensibility, become exquisitely sensible in the inflamed. That this is the case with Cartilage, bone, ligament &c. the everyday experience of Physicians testifies.

The kind as well as the degree of pain varies much in different inflammatory affections. In some it is continued, in others intermittent; sometimes it is acute, at other times dull; again it is itching, prickling, tearing, lancinating or throbbing.

The sensibility of the Nose and Mouth, as organs of sense, is generally diminished during the state of inflammation. The reverse is the case with the eye and ear, which become exquisitely sensible in inflammation.

Pain, when found with other constitutional symptoms, is one of the surest marks which we

possess of the existence of inflammation
in the internal parts of the body.

Heat, or real increase of temperature in an
inflamed part, is much less than our feelings
would lead us to imagine. It never exceeds
the heat of the blood at the heart. This, in health
is generally about 100° Fahrenheit, but sometimes
in disease it rises to 106° , or 107° . — Parts nearer the
centre of the circulation, are naturally warmer
than those more distant, therefore, the increase
of temperature accompanying inflammation
will be proportionably greater in the latter, than
in the former.

The increase of temperature in inflammation
is supposed to be caused by the more rapid oxy-
dation of the tissues, consequent on the increased
influx of blood into the part inflamed. Some
suppose, that the increased heat may be

ascribed to the vital energy.

Connected with increase of temperature in the inflamed part seems to be the state of dryness, a want of perspiration which often occurs in the skin. It may be observed, in inflammation of the joints, whether rheumatic, scrofulous, or caused by external injury, that the skin covering them remains hot and dry, while the rest of the body is covered with perspiration; and as soon as the pain, heat, and swelling abates, a moisture appears on its surface. — This local appearance resembles a general one that occurs in typhus & scarlatina. The skin in the commencement of these fevers is hot and dry.

Swelling, in inflammation is accompanied with a greater or less degree of stretching or tension. In the earlier stages it seems

to be produced solely by the unusual influx of blood. As, the inflammation proceeds, a quantity of serous fluid is usually poured out into the interstices of the cellular membrane, in the parts contiguous to the seat of inflammation. In some cases, when the inflammation runs high, the effused fluid is found tinged by a red color. In other cases coagulable lymph seems to be effused. When this happens the swelling continues after every other mark of inflammation has disappeared.

The degree of swelling, and the distance to which it extends in inflammation, depends partly on the violence of the attack, but chiefly, perhaps, on the structure of the parts in which it occurs.

Almost all parts of the body feel hard

at the commencement of inflammation. This is remarkably the case in the swelling of the integuments, so very common an attendant on inflammations of the bones, or their membranous coverings.

The causes of inflammation may be classed under the terms direct and indirect.

Direct causes, may be divided into mechanical and chemical, of the first class we have.

Pressure, — This is very liable to excite inflammation in parts which are sound, or mortification in those already inflamed. Continued pressure upon any part of the skin occasions a redness to appear after the pressure has been removed. We see this effect produced upon the hands and cheeks of those who have fallen asleep with those parts pressing on each other; and we may often

observe this redness pass into the state of inflammation in accidents and diseases, which fix the body in one position, and oblige the patient to rest his weight for a considerable time upon particular parts.

Friction, - Slight degree of friction upon the skin excites warmth; but if it be increased, or long persisted in, it will soon occasion inflammation. There are some parts of the body, as the eyes, which are more liable to inflammation from this cause, than others.

Bodies which bruise, - We have examples of the effect of these in contusions of all kinds, when contusion is slight inflammation is the consequence, but when severe, mortification is likely to be the result.

Bodies which divide a cut, - The time which elapses between the application

of these bodies and the occurrence of inflammation in wounds, is various in different individuals.

To the class of Mechanical causes may also be referred the irritation caused by all solid bodies foreign to the system, whether introduced from without or generated within the body itself.

We have examples of the former in needles, pins, bits of glass &c. - which sometimes occasion immediate inflammation, and at other times remain in the body, or even move through considerable portions of it, without producing inflammation; we have examples, of stones which sometimes form in the Kidneys, and afterwards excite inflammation in passing through the Ureters and Bladder.

To the class of Chemical causes belong all substances capable of exciting inflammation in the parts

to which they are immediately applied, without at the same time appearing to produce any visible mechanical effects. Such are high degrees of temperature, the action of concentrated acids & alkalis; acrid vapors, such as ammoniacal, nitrous, sulphureous and other gases.

If these are applied in a high degree of power, many of them destroy the vitality and structure of the parts on which they act. Applied in a less degree of power, many of these chemical causes excite almost instantaneously, a high degree of inflammation, which is often followed by the death of the part, if not of the whole system. We have examples of this in the effects of poisons. If again the chemical power be much diluted it may, when applied to the different external or

internal surfaces of the body, either produce no inflammation, or only a slight degree of that state.

The cuticle seems to have a great influence in resisting the action of many of the chemical causes exciting inflammation, and in protecting the body from their injurious effects; for these effects are often produced only when the cuticle has been removed, so as to allow the chemical agent to come into contact with the subjacent textures.

The effects of heat in exciting inflammation are very generally known. Inflammation of the brain, and inflammatory affections of the face and neck, often arise, in almost every climate, from exposure to the influence of the sun's rays; the inflammatory affections resulting from

the application of artificial heat, are of daily occurrence.

The indirect causes of inflammation are very numerous. Under this head might be comprehended the operation of all those powers, which when applied to the body, either excite inflammation in parts at a distance from those to which they are more immediately applied, or, if they excite inflammation in those parts, produce that effect only after a certain interval of time, and in consequence of changes which they seem to produce in the general Constitution.

The Operation of Cold upon the human body is a good example, of the production of inflammation from the operation of a power acting upon a part at a distance from that in which the inflammation takes place. Instances

of inflammation of the throat, chest or abdomen, from the application of cold to the feet are frequent occurrences in this climate.

In other instances cold, or a diminution of temperature, seems to act more directly upon the parts with which it comes into contact. We have examples of this in the inflammation of the Mucous membranes of the nose, fauces, trachea, and bronchi, from breathing cold air; and in the production of Rheumatic inflammation from the accidental exposure of some part of the body to Cold and Moisture.

Under the head of Causes indirectly exciting inflammation, may be classed all those substances, which, when taken into the stomach, produce peculiar and specific inflammation. The eating, of various fruits, Shell fish &c. often produce in individuals,

of certain idiosyncracies, an inflammatory eruption of the skin.

Of the Lead of Causes indirectly exciting inflammation, perhaps, may be referred almost all the morbid animal poisons, which are generated in the human body, or propagated in it by succession from individual to individual.

Some of these poisons produce inflammation, in the parts into which they are immediately introduced, as the poison of itch, or of Syphilis; but in most instances the poison, though locally introduced, produces its specific effects only, through the medium of the general constitution.

Treatment - Holding, as we do, to the only and true law "Similia Similibus Curantur" we believe all cases of inflammation

Should be treated with appropriate remedies indicated by the totality of the Symptoms. In the limits of this Essay we can only give a few of the leading remedies which would be called for in different inflammations -

Inflammations caused by mechanical injuries; Arnica, Aconite, Calendula, Belladonna, Bryonia, Cicuta, Nux, Sedum, Pulsatilla, Rhus tox, Ruta, Staphysagria &c,
Contused wounds; Arnica, Calendula, &c
Sprains; Arnica, Bryonia, Rhus tox, &c
Incised Wounds; Staphysagria,
Cerebral affections caused by wounds
Aconite, Arnica, Bell, Bryonia &c
Encephalitis. Belladonna, Aconite,
Bryonia, Camphor, Hyosciamus,
Nellbore, Stramonium, &c,

Ophthalmia; Aconite, Belladonna, Arsenicum,

Calcareo carb., Chamomilla, Nux Vom, &c.

Otitis; Pulsatilla, Belladonna, Mercurius,

Nux vom, Sulphur &c

Pharyngitis; Aconite, Belladonna

Cantharis, Lachesis. &c

Laryngitis; Aconite, Hepar s. c.

Spongia, Chamomilla &c.

Pleurisy; Aconite, Bryonia,

Sulphur, Phosphorus, &c

Pneumonia; Phosphorus, Aconite,

Bryonia, Rhus, Sulphur, &c.

Enteritis; Aconite, Belladonna,

Mercurius, Nux Vomica,

Hepatitis; Nux Vom, Mercurius,

Acon, Bell, Bry, Sulph, Cham,

Nephritis, Belladonna, Canabris,

Cantharis, Nux. Vom, Pulsatilla

&c.